

# **Rare Whale First Discovered Along the Carolina Coast a Century Ago**

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On a warm summer morning in July of 1912, a large animal—over 16 feet long—washed up on Bird Island Shoal, inside the entrance to Beaufort Inlet between Beaufort and Fort Macon. For the fishermen who found the strange carcass, it was an odd find. But none who saw the unusual creature stranded on the sandbar would have guessed at the significance of what had come ashore that morning on an island along the Carolina coast.

At first glance, it looked like an ordinary blackfish or cowfish, generic terms locals used as a catchall phrase for relatively small, dark-colored cetaceans such as pilot whales that occasionally visit the area. But upon closer inspection, this particular whale was unlike any they had ever seen. This cowfish had a long, pointed beak like a dolphin. Even stranger was the fact that there were no teeth showing from the jaws.

The remains of most marine mammals that stranded along this stretch of coast in years gone by did not survive for long, as the inhabitants processed the bodies of whales, dolphins and seals for oil. But the fishermen who found these remains were curious about this strange whale, so they contacted the folks at the U.S. Fisheries Laboratory at Beaufort on nearby Pivers Island. Perhaps they could find someone there who could figure out what kind of creature had washed in from the Atlantic Ocean through Beaufort Inlet.

Two assistants from the lab sped to the scene in Launch 106, but they were as clueless to the animal's identity as the fishermen before them had been. They knew they would have to call in the resident expert on marine life of the area, Dr. Lewis Radcliffe. As director of the U.S. Fisheries Laboratory at Beaufort, Radcliffe examined a wide range of marine life in the vicinity of Cape Lookout. A noted ichthyologist, he inspected sharks, rays, bluefish, and just about any other type of fish that

was caught by the fishermen working out of Beaufort or Morehead City. Occasionally he inspected the marine mammals such as whales, dolphins, manatees and seals that were captured or washed ashore along the southern Outer Banks. He kept an eye out for anything unusual that might be of scientific importance to researchers.

Radcliffe and his associates knew they had found some sort of whale, but exactly what type of whale it was they could not tell. They hauled the animal's remains back to the laboratory at Beaufort, where Radcliffe carefully studied the animal and gathered as much data from it as he could. This must have been quite a task, as adult whales of this species weigh between two thousand five hundred and three thousand pounds.

Radcliffe reported (True 1913), "Body covered with a thick layer of fat, flesh beneath this layer very dark red, of loose texture, coarse and stringy." He described the animal's coloration as, "Back, slate-black; lower sides, yellow-purple, flecked with black; median line of belly somewhat darker; a grayish area in front of vent; fins the color of the back."

The whale was 16 feet long, and the width of its flukes was 4 feet 8 inches. The scientists in Beaufort were unable to weigh the entire whale, but they were able to make some measurements of various body parts. The animal contained sixty-eight feet of intestines, and had a stomach that was made up of three chambers. The whale's heart was nearly a foot wide, 15 inches long, and weighed 10.5 pounds.

If he were to gain further insights on the whale, Radcliffe knew he would have to consult with someone who had more experience working with marine mammals. So he packed up the head, flukes, a pectoral fin and various parts of the skeleton into a barrel. On July 29th, 1912, he shipped this collection north to the U.S. National Museum, a branch of the Smithsonian Institution in Washington, DC. He hoped scientists there would be able to determine the unusual whale's identity.

Radcliffe made some interesting observations about whales similar to the one in hand that were seen in the vicinity of Beaufort Inlet and the mouth of the Newport River. "I believe this form is not uncommon here. Large cetaceans which answer its description are not infrequently seen swimming about the laboratory, three being sighted at one time. In swimming, the dorsal fin is seen above the water, and at times it resorts to the bounding motion not unlike the porpoise."

The decision to send the whale's remains to the Smithsonian for further examination was an opportune one. Once in Washington, they piqued

the interest of Frederick W. True, assistant secretary of the Smithsonian. True's distinguished career at the Smithsonian began in 1881 when the then 23-year-old Connecticut native became the museum's librarian and acting curator of the Division of Mammals. He served in a number of important positions during his tenure at the Smithsonian, and in 1897 was named curator of the Department of Biology.

True was considered the nation's foremost expert on marine mammals. He studied the remains of these and other mammals sent to the museum, and created a collection of marine mammal skeletons that was unrivalled in the last decades of the nineteenth century. In addition to working on animal remains in the lab, he occasionally took advantage of opportunities to travel on the oceans to remote reaches of the world with the vessels of the U.S. Fisheries Commission to study marine mammals in the wild.

Despite being burdened with the administrative duties of his position, True continued to study whales whenever an opportunity presented itself. Just two years before the remains of the mysterious whale from Beaufort arrived at the Smithsonian, he had published an eighty-nine-page monograph discussing the beaked whales of the world. He commented (True 1910) on the rarity of beaked whales in the world's oceans. "The beaked whales belonging to the family Ziphiidae are, with the exception of the bottle-nosed whales of the genus *Hyperoodon*, among the rarest of cetaceans. Of the three genera *Mesoplodon*, *Ziphius*, and *Berardius*, so far as I have been able to ascertain from published records, specimens representing about one hundred individuals are known, and somewhat more than one-half of these belong to the first-named genus. *Berardius* is the rarest genus, only about fourteen specimens having been collected thus far. The U.S. National Museum contains specimens representing some twenty-five individuals of the three genera, or about one-fourth of the material presently available. Among these are six specimens of the genus *Berardius*, or nearly half of all that have been recorded thus far."

Once he finished his examination of the whale from North Carolina, True realized that he was looking at the remains of an animal from an as yet undocumented species. True (1913) noted, "The lower jaw was only a very little shorter than the upper, and its superior border was concave. There was no appearance of teeth in either upper or lower jaw, and it was not until the integuments were removed that two small teeth were discovered, lying close to the extremity of the mandible. These teeth are small, conical, and acute, and are strongly inclined forward and a little outward. The presence



Fishermen looking over the strange whale that stranded upon Bird Island Shoal near Fort Macon, North Carolina, in July of 1912. Photo courtesy Smithsonian Institution.



Frederick W. True examined the remains of the whale found on Bird Island Shoal and determined it was a species new to science. Photo courtesy Smithsonian Institution.

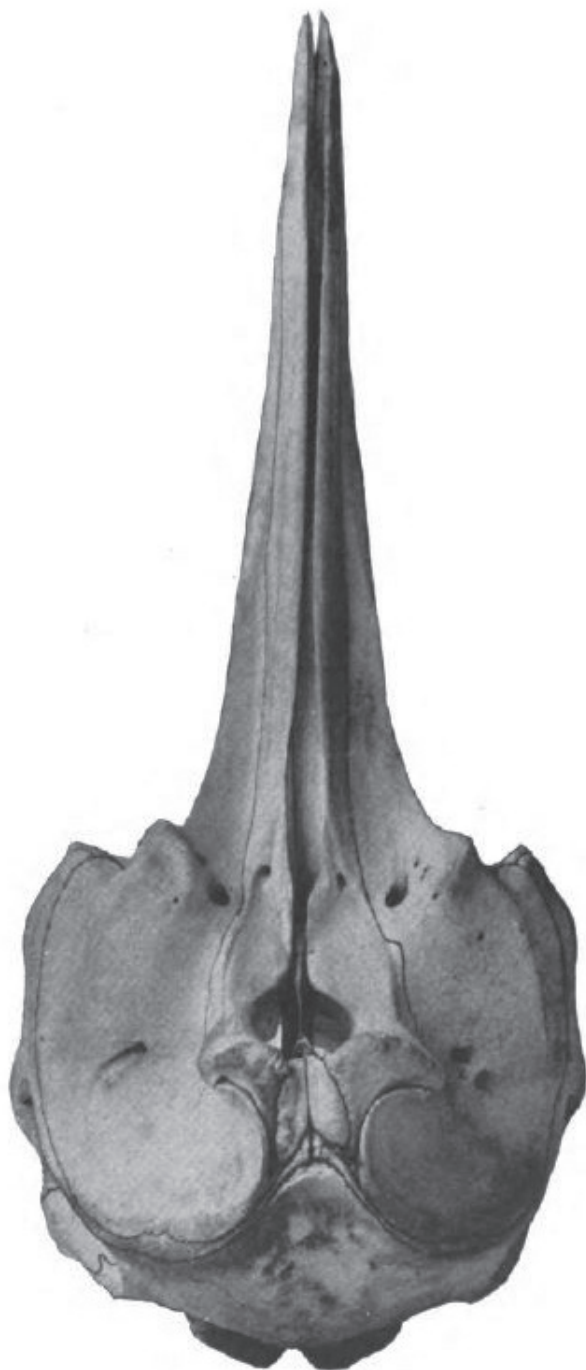
of teeth in this position at once suggested that the species was either an undescribed one, or else *M. hectori* Flower, of New Zealand. An examination of the skull showed, however, that the proportions and general conformation were quite unlike those of *hectori*. On the other hand, it presented a very close resemblance to *M. europaeus* in many particulars. It might be supposed that the peculiar position of the teeth was characteristic of the female of that species, but both sexes of the latter are known, and both have the teeth near the posterior end of the symphysis. There seems to be sufficient reason, therefore, to regard the Beaufort specimen as representing a new species.”

Since he was the first to describe the new species, True was able to assign the official Latin name to these beaked whales—*Mesoplodon mirus*. The species is commonly referred to as True’s beaked whale. Other names for the species include True’s North Atlantic beaked whale, or the wonderful beaked whale.

Like other species of beaked whales, True’s beaked whales are rarely seen in the wild. Several were found down through the years stranded along the coast as far afield as South Africa and Australia. Scientists today believe these whales are distributed in the temperate waters of the world’s oceans, but admit to knowing little about their migrations and living patterns.

There is a possibility that True’s beaked whales inhabiting the southern hemisphere are a distinct subspecies from those found in the northern hemisphere, but as of right now, there is just too little information on these rare cetaceans to make that determination. Jefferson, et al. (2015) note that marine mammalogists currently recognize a North Atlantic Form and a Southern Hemisphere Form.

Most specimens of True’s beaked whales have been found in varying degrees of decomposition. Nearly thirty years after the specimen was discovered at Beaufort, naturalist H.H. Brimley of the North Carolina Museum of Natural History studied one of the most important of the stranded True’s beaked whale specimens. This particular whale, measuring 17 feet long, was found in March of 1940 just north of Oregon Inlet by some fishermen. What is notable about this whale is the fact that it was a gravid female, the first ever discovered in the world. Studying this animal and her unborn calf gave Brimley the opportunity to gain some new insights into the life history of these cetaceans.



**SUPERIOR VIEW OF SKULL OF BEAKED WHALE.**

This view of the skull of the True's beaked whale appeared in True's final report of his examination of the specimen sent from Beaufort.



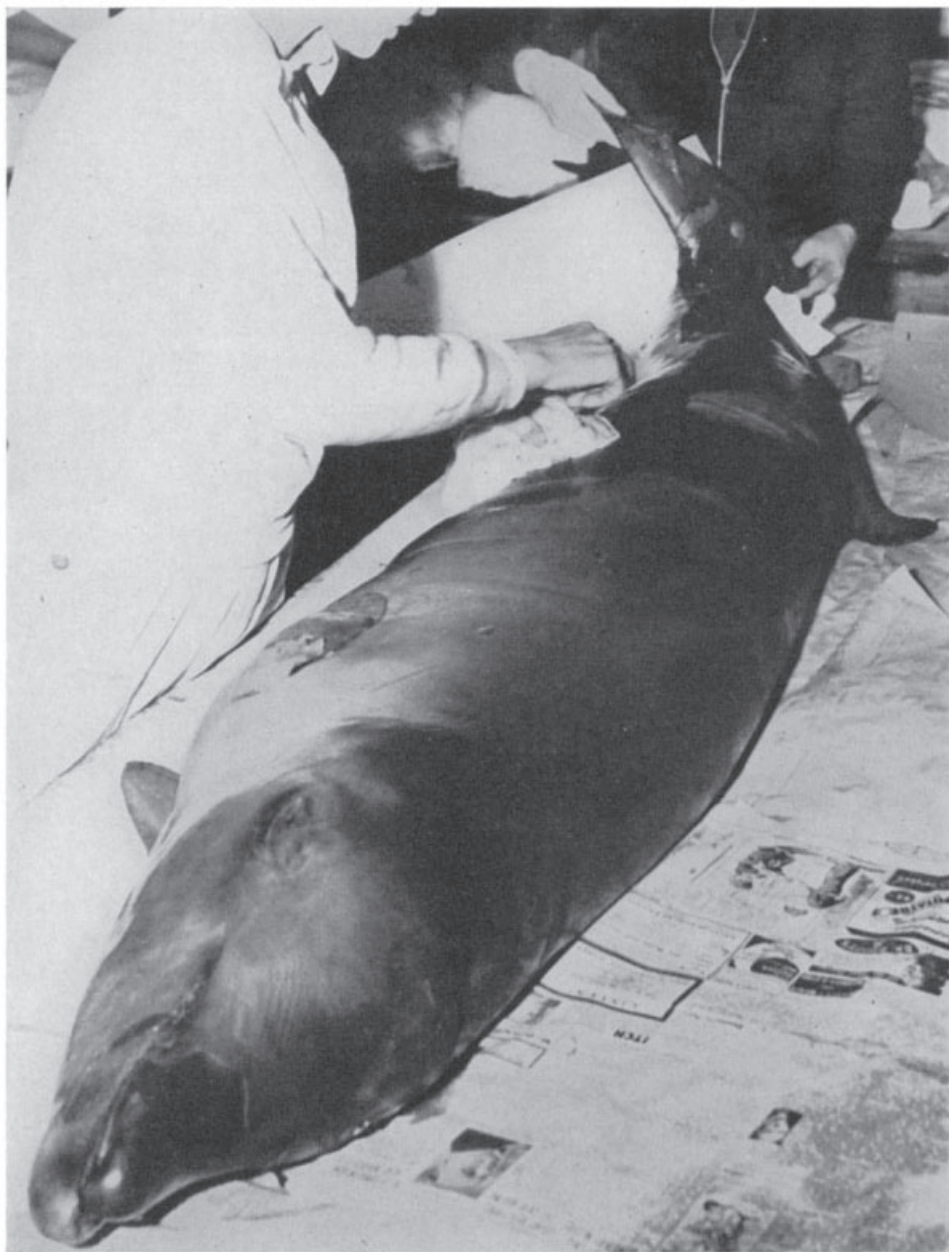
Museum director Harry Davis headed to the Outer Banks to retrieve the specimen, which had deteriorated somewhat over the week that had transpired between when the whale stranded and when he was finally able to make the trip to the coast. Upon returning to Raleigh, the animal's remains were studied in depth by his colleague. Brimley noted (1943), "The specimen proved to be an adult female ziphioid whale, 17 feet in length and it was found to contain a well-developed foetus about ready for delivery. The foetus measured 7 feet 2 inches in length with an estimated weight of 175 to 200 pounds."

The researchers were intrigued with the unborn whale, and made some rather detailed observations of the animal. "In situ, the foetus was doubled back on itself, left side to left side, the distal portion making a quarter turn in the region of the caudal peduncle so that the caudal fin fitted snugly against the throat, with the individual flukes curved up close to the sides of the head. The foetus was facing backwards in the body of the parent, towards the genital opening."

Brimley was not certain the cetacean he examined was in fact a True's beaked whale, as there are other species of beaked whales found in the same area. So to help confirm his theory as to the whales' identity he sent the skull from the female whale to Dr. Remington Kellogg, curator of the Division of Mammals at the U.S. National Museum, for further examination. Before shipping it off, Brimley made a mount of both the mother and calf for the museum in Raleigh. Kellogg's investigation confirmed the whale's identity as a True's beaked whale, and he informed Brimley that it was one of only eight such specimens ever reported.

Despite being studied by some of the nation's top experts, True's beaked whales remained enigmatic creatures. A few glimpses of deceased individuals were the limit of our knowledge of these animals. Almost eighty years passed before someone spotted and photographed what they believed was one of these whales in the wild. These particular animals were spotted off the North Carolina coast, not too far from where the first specimen had been found.

On May 29th, 1993, Dr. Michael Tove and twenty-eight of his fellow marine life enthusiasts were patrolling the waters off the Outer Banks, forty-five miles southeast of Hatteras Inlet, aboard the 57' fishing boat, *Country Girl*, which had been chartered for the trip. A noted naturalist, Tove organized the daylong excursion so the group of naturalists could hopefully spot a rare seabird called a Fea's petrel, *Pterodroma feae*. One



Naturalist H.H. Brimley of the North Carolina Museum of Natural History studies the remains of the gravid True's beaked whale and its unborn fetus found near Oregon Inlet, North Carolina in March of 1940. Photo courtesy NC Archives and History.



notable discovery of the day occurred shortly before noon when they spied a brown skua, *Stercorarius antarcticus*, the first instance of that bird being identified north of the Equator.

Two hours after spying the skua, the group spotted a pod of whales swimming on the surface of the ocean. Tove watched the animals as they swam near the boat, and quickly surmised that these were some sort of beaked whales. Tove (pers. comm.) observed, “I suspected *mirus* early on for several reasons. First, the head and body shape suggested that species and seemed incorrect for *europaeus* and *bidens*, based on my study of dead animals. Second, the stranding data made *mirus* among the most likely candidates.”

Tove excitedly shared the news of the importance of what they were seeing with his fellow passengers. For the next several minutes, the bird-watchers took their eyes off the sky and instead scanned the waters of the sea watching the three rare whales surface and dive. Fortunately, the captain of the boat was able to keep up with the animals’ movements, as the whales did not immediately dive into the depths to get away from their curious visitors.

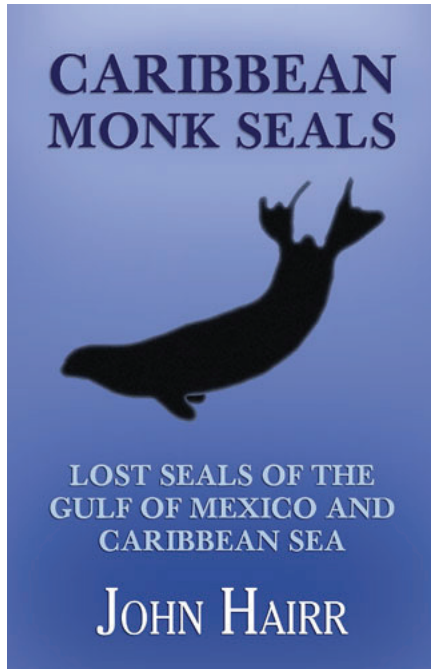
He continued, “There was a pod of three animals: two adults that appeared to be females and a calf. Due to our inadvertently separating the calf from the adults in our ‘chase’ (at a whopping 3 knots), we were able to stay with the animals for about ten minutes, during which time we successfully photographed them, including the 5-shot blow-roll series published in *Marine Mammal Science*.”

Tove (1995) later observed, “Although quite unlikely, one cannot summarily dismiss the possibility of another of the dozen or so species within the genus. Fortunately, the literature seems consistently to indicate that the combination of overall shape of the head, particularly the melon and beak with the sharp spinal ridge posterior to the dorsal fin, point uniquely to True’s beaked whale”

True’s beaked whales remain one of the most elusive species of marine mammals on the planet. Scientists today are unsure if beaked whales like the one found in Beaufort Inlet just over a century ago are in danger of extermination, or whether they are thriving in the depths of the ocean far away from human interference.

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*Caribbean Monk Seals*, by John Hairr